UNITED STATES PATENT AND TRADEMARK OFFICE

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10/561,664	07/20/2006	Ammad Akram	AAT-105US	7811

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EXAMINER
CHAKOUR, ISSAM

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>16 December 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-14</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-6 and 12-14</u> is/are rejected.

7)☒ Claim(s) <u>7-11</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>16 December 2005</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>12-16-2005</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 7-11 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim may not depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, these claims have not been further treated on the merits.

Claims 1-4 are objected to because of the following informalities: In claims 1 and 4, the word "synchronised" is misspelled. The dependent claims inherit this deficiency. Appropriate correction is required.

Claim Rejections - 35 USC § 101

1.		35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The claimed invention is directed to non-statutory subject matter.

Claims 12, 13, and 14 are rejected under 35 U.S.C. 101 because these claims recite

"computer program" not associated with a computer readable medium which is non-

statutory subject matter.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 1-4, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by

Kallio (US 2002/0147008).

4.   In claim 1, Kallio discloses a method of operating a mobile communications node

which has at least two different interfaces (See paragraph [0027]) for providing

connectivity with first and second different communications networks respectively (See

abstract and figure 1), and which is receiving data from a remote corresponding node

(e.g. MSC, see figure 1, item 120) via the first network (GSM network, see abstract), in

which: in response to a trigger (See paragraph [0013], lines 11-12), a SIP protocol (See

paragraph [0033]) related handover request is generated by the mobile node to initiate

handover from the first network to the second network (e.g. WLAN, see abstract); on

completion of handover the first network interface is set to sleep mode or switched OFF

(See paragraph [0048], line 5); and the initiation of sleep mode is synchronized with the

cessation of the receipt of data packets via the first network (See paragraph [0013],

lines 8-9).

5.   In reference to claim 2, Kallio teaches the method in accordance with claim 1 in

which the trigger (e.g. handover command) is a signal sent to the mobile node (See

paragraph [0050], line 6).

6.   In reference to claim 3, Kallio discloses the method according to claim 1, in which

the trigger (the trigger is a handover initiation signal sent from the mobile node) is a

signal generated by the mobile node (See table of steps in page 7, step 5).

7.   With respect to claim 4, Kallio further discloses that the handover request is sent

from the mobile node (See paragraph [0054], lines 4-5; Note that the request is a result

of testing for certain conditions and parameter thresholds of signals received from the

base-stations) to the corresponding node (e.g. mobile switching center- MSC) via the

second network (e.g. GSM network) and the initiation of sleep mode (or switching off

the corresponding interface upon successful handover process, see paragraph [0048],

lines 5-6) is synchronized with the mobile node receiving an acknowledgement

message from the corresponding node (See paragraph [0057], lines 5-7).

8.   In reference to claim 12, Kallio further teaches a computer program product for

installation in a mobile communications node (e.g. the handover algorithm, see

paragraph [0054], lines 1-2), which mobile node has at least two different interfaces

(See abstract and figure 1) for providing connectivity with first and second different

communications networks respectively whereby when the mobile node is receiving data

from a remote corresponding node (e.g. MSC, see figure 1, item 120) the data stream

can be handed over from one network to the other (See abstract), the program when

installed enabling the mobile node to set to sleep mode the interface for the first network

following handover to the second network (See paragraph [0048], line 5) in

synchronization with the cessation (e.g. release of resources, see [0058], lines 8-10) of

the receipt of data packets via the first network.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

3.   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kallio.

9.   Regarding claim 5, Kallio teaches the method in accordance with claims 1, 2, and

3 respectively in which the handover request is sent from the mobile node to the

corresponding node via the second network (Note that the second network is the GSM

network, See paragraph [0054], lines 4-5), an acknowledgement message (note that the

handoff command is an acknowledgement message as well) returned from the

corresponding node (See paragraph [0057], lines 6-7), and the initiation of sleep mode

for the first network interface is synchronized with the sending of the acknowledgement

message by the mobile node (See paragraph [0048], line 5).

10.   Kallio fails to explicitly teach an acknowledgement message is sent from the

mobile node to the corresponding node.

11.   However, the examiner takes official notice that it is well known in the art, that,

after authenticating, providing the new IP address from the corresponding node, and

finalizing the handoff process, sending another ACK signal to the corresponding node

by the mobile node is solely for securing records of robust communication sessions and

validating successful handoffs. It would have been obvious to one of ordinary skill in the

art at the time of the invention to utilize acknowledgement message to the CN from MN

as a notification of the end of a handoff session because it constitutes a further measure

to ensure robust transfer of data. Note further that this modification assures that

reliability issues that may arise from synchronous problematic events are mitigated.

4.   Claims 6, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Kallio in view of Davis et al (US 6,105,064).

12.   Regarding claim 6, Kallio teaches the method in accordance with claims 1, 2, and

3 respectively. Kallio fails to teach explicitly that the sleep mode for the first network

terminal is initiated in response to a marker in the received data stream indicating that

the stream via the first network has come to an end. However, Davis teaches marking

packets of data for indicating certain information or triggering a step in a process (See

column 5, lines 60-63). It would have been obvious to one of ordinary skill in the art at

the time of the invention to use the technique as taught by Davis to trigger in Kallio's

invention the sleep mode or switching off the first network interface to reduce battery

power consumption on one hand and to validate the successful handoff session by

transmitting an acknowledge message to the CN on the other.

13.   Regarding claim 13, Kallio discloses as in claim 12 the computer readable

medium having instructions (e.g. the handover algorithm, see paragraph [0054], lines 1-

2) for enabling the mobile node to initiate sleep mode (See paragraph [0048], line 5) for

the first network interface. Kallio fails to teach explicitly that the initiation of sleep mode

is in response to a marker in the received data stream indicating that the stream via the

first network has come to an end. However, Davis teaches marking packets of data for

indicating certain information or triggering a step in a process (e.g. indicating that data

transmission has come to an end, see column 5, lines 60-63.). It would have been

obvious to one of ordinary skill in the art at the time of the invention to use the technique

as taught by Davis to trigger in Kallio's invention the sleep mode or switching off the first

network interface to reduce battery power consumption on one hand and on another to

validate the successful handoff session by transmitting an acknowledge message to the

CN.

14.   In reference to claim 14, Kallio in view of Davis teaches the limitations as in claim

12; Davis as mentioned above (See column 5, lines 60-63) teaches using the marked

information contained in portion of the data stream to trigger a step in a process (e.g.

sending a validating ACK message to the CN). It would have been obvious to one of

ordinary skill in the art at the time of the invention to use the technique as taught by

Davis to trigger in Kallio's invention switching off the first network interface to validate

the successful handoff session by transmitting an acknowledge message to the CN as a

reliability measure.

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Hason et al (US 2005/0250496) teaches a handoff

communication method for heterogeneous wireless networks while minimizing power

consumption of portable devices used in the communication with said networks.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to ISSAM CHAKOUR whose telephone number is

(571)270-5889. The examiner can normally be reached on Monday-Thursday (7:30-

5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Mark Robinson can be reached on 5712722319. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

IC

/Mark A. Robinson/
Supervisory Patent Examiner, Art Unit 4163